



SOME RADIATION SAFETY DATA
PERSONNEL RADIATION DOSES

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RADIATION SAFETY STANDARDS FOR EXTERNAL PLUS INTERNAL DOSES

Whole body, head and trunk, active
blood-forming organs, gonads,
or lens of eyes 3 rem/calendar quarter

life dose not to exceed 5(N-18) rem*

Skin, thyroid and bone 7 1/2 rem/calendar quarter

Hands and forearms, feet
and ankles 18 3/4 rem/calendar quarter

Other organs 3 3/4 rem/calendar quarter

* where N = age in years at last birthday

Note: If the radiation history of an individual is not known,
then the whole body dose is limited to 1 1/4 rem/calendar
quarter. Such rules-of-thumb as 2.5 mrem/hr, 20 mrem/day
and 100 mrem/week derive from this lower limit.

PARTICLE FLUXES (particles cm⁻² sec⁻¹) FOR 1 MREM/HR

Energy GeV	Neutrons	Protons	Electrons	Photons	π^+	π^-
0.02	6.2			64.	1.	0.041
0.2	5.2	.6	5.1	9.2	1.9	1.5
2.	1.6	1.4	2.6	4.1	1.4	1.4
20.	.67	.58	1.7	3.5		
200.	.25	.23	1.4	3.		
500.	.19	.18				

Muons, minimum ionization = 8.7

outside a thick shield (atten. > 10⁵) = 7.8

